

DISPOSAL OF WASTE CONTAINING ASBESTOS

1. INTRODUCTION

Waste asbestos containing material (asbestos waste) is basically divided into three categories: friable, non-friable, and Presumed Asbestos Containing Material (PACM). Friable means any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Nonfriable means any material containing more than one percent asbestos that, when dry, cannot be crumbled, pulverized, or reduce to powder by hand pressure. Nonfriable material is further classified into two categories. It must be demonstrated according to Occupational Health and Safety Act (OSHA) procedures that PACM does not contain asbestos in order for the material to be exempt from these requirements.

Handling and disposal of wastes containing friable asbestos are regulated. Note that Regulated Asbestos Containing Material (RACM) also includes ACM or PACM that has become friable or is expected to become friable due to sanding, abrading, grinding, cutting, or demolition or renovation activities.

Section 112 of the Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to develop emission standards for hazardous air pollutants. In response, EPA published a list of hazardous air pollutants and promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations. Friable asbestos is a hazardous air pollutant. NESHAP regulations for asbestos (40 CFR 61, Subpart M) covers milling, manufacturing and fabricating, demolition and renovation, waste disposal, active and inactive disposal sites, and asbestos conversion processes.

There are several State and federal regulatory requirements for handling and disposing of asbestos that apply to this guidance. They are:

- A. 18 AAC 60.450, Alaska's regulations for monofill disposal of ACM,
- B. 40 CFR 61.141 - 157 for the disposal of RACM. The federal standard for active asbestos disposal sites, the standard most applicable to an asbestos monofill operator, is found in 40 CFR 61.154,
- C. 40 CFR 61.145 for demolition and renovation of a facility containing asbestos,
- D. 40 CFR 61.150 for waste disposal for manufacturing, fabricating, demolition, renovation and spraying operations,
- E. 40 CFR 61.151 for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations, and
- F. 29 CFR 1910.1001, for OSHA's on-site signing and safety requirements; record keeping; vehicle and container labeling; and requirements for worker training, certification, medical monitoring, and clothing and respiratory protection.

2. PREPARING THE ASBESTOS WASTE DISPOSAL SITE

A. Please review the asbestos waste disposal regulations and this guidance carefully, then arrange a meeting with ADEC's Solid Waste Program staff to determine what you will be needed to permit the disposal of asbestos waste on your site. Permit applications are available at ADEC Public Service Area Offices.

B. Select a site that meets the federal requirements contained in 40 CFR 61.154. Generally speaking, a site should be located where adequate cover material is available, where access is good and controllable, and where the asbestos waste cannot be exposed by water or wind erosion, slope failure, seismic activity, or re-excavation. Meeting these and other similar criteria means that the site will probably meet conditions contained in a permit to dispose of asbestos. A permit may contain site-specific requirements in addition to the guidance provided by this document.

C. During and after disposal of the asbestos waste at any active waste disposal site, either no visible emissions can occur to the outside air, or the waste must be covered with at least 6 inches of compacted nonasbestos containing material within 24 hours of deposition. Note: you must obtain prior written approval from the EPA if you plan to use alternative emission control methods.

D. Unless a natural barrier adequately deters access by the general public, you must either cover all asbestos waste containing material with at least 6 inches of compacted nonasbestos containing material within 24 hours of deposition, or install fencing, berms, trenches, or other barriers to prevent unauthorized access to the designated asbestos disposal area. If asbestos waste is to be disposed of in a municipal solid waste landfill, designate a separate area for the asbestos monofill. Enclose the asbestos waste disposal area within a 6-foot high chain link fencing topped with a barbed wire guard.

E. Post signs at all site entrances and at 330-foot intervals or less along the site boundary. The signs will have lettering that states:

ASBESTOS WASTE DISPOSAL SITE (use one-inch lettering)

DO NOT CREATE DUST (3/4-inch lettering)

BREATHING ASBESTOS DUST IS HAZARDOUS TO YOUR HEALTH (14 point Gothic)

Vehicles transporting asbestos containing waste material for disposal must have prominently displayed 14 by 20 inch signs with the following legend:

DANGER (one-inch lettering)

ASBESTOS DUST HAZARD (one-inch lettering)

CANCER AND LUNG DISEASE HAZARD (3/4-inch lettering)

Authorized Personnel Only (14 point Gothic)

F. The U.S. Environmental Protection Agency (EPA) requires that access at the site be controlled to prevent exposing the public to potential health and safety hazards. To protect the landfill operators who handle asbestos from liability, fences and warning signs should be kept in place after final cover has been applied. A permanent monument indicating that asbestos is buried below must be maintained.

3. RECEIVING WASTE ASBESTOS

A. Anyone working in contact with asbestos must meet the worker safety and asbestos handling requirements in 29 CFR 1910.1001.

B. If a certified worker must sample any waste suspected to contain asbestos, do not allow the use of envelopes or plastic and paper bags. Such containers can act as bellows when opened and can expose everything and everyone to airborne fibers. Follow the sampling and safety procedures in 29 CFR 1910.1001, Appendix J.

- C. The permittee or designated representative must be present at the site to supervise the disposal.
- D. The landfill operator must maintain a log of the source and quantity (in cubic yards) of asbestos delivered. Landfill operators should require the driver to sign in and sign over a chain-of-custody or waste manifest form. The facility owner must maintain shipping manifests and all other records pertaining to the asbestos containing waste.
- E. Vehicles with waste compactors should not be used to haul bags or other containers containing asbestos.
- F. Friable asbestos waste must be thoroughly wetted and placed in leak-tight containers before transport and burial. Containers may be barrels, drums, or plastic bags that are 6-mil thick or thicker. If plastic bags are used, double bagging is recommended.
- G. Loads must be inspected to verify that friable asbestos waste is properly wetted and contained in leak-tight and appropriately labeled containers. Improperly containerized waste received at the disposal site should be covered immediately after unloading. The operator should then contact this agency and the EPA. The number for EPA's asbestos staff is 907 269-4954 in Anchorage, and 206 553-1757 in Seattle.
- H. All containers for friable asbestos waste shall have the following warning label:

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID OPENING OR BREAKING CONTAINER
BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH

or:

CAUTION
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
BREATHING ASBESTOS DUST
MAY CAUSE SERIOUS BODILY HARM

I. Non-friable asbestos waste material must be buried in the designated asbestos disposal area in a manner that does not result in the release of asbestos dust. There are no regulations that require non-friable asbestos to be packaged or labeled, but in some cases, packaging may be necessary to prevent the release of asbestos dust that can result from crushing or abrasion. The generation of asbestos dust from non-friable asbestos is a violation of NESHAP. Note: Disposal of non-friable asbestos material into a normal waste stream such as municipal solid waste creates a high potential for generating asbestos dust and is not permitted.

3. WASTE DEPOSITION AND COVERING

- A. Asbestos waste must be placed into a trench carefully to avoid breaking the containers. Particular care must be taken with plastic bags since they may break under pressure and emit asbestos particles. Do not compact containers of asbestos waste until they are completely covered and there is no potential for asbestos or asbestos particles to escape.
- B. To ensure there will be no unauthorized contact with the waste and no chance for asbestos to escape, you should cover the waste and container with at least six inches of non-asbestos material within 24 hours of each waste deposition
- C. Final closure of an area containing asbestos waste requires at least an additional 30 inches of compacted non-asbestos material to provide a 36-inch final cover. Areas that will not receive more asbestos waste within one year must be covered in this manner within 90 days of the last deposition. Additional cover may

be required in areas subject to erosion, or to shrink-swell fissures resulting from extensive frost action or dehydration of certain clays. In areas where vegetation is difficult to establish and maintain, three to six inches of well graded crushed rock may be needed on top of the final cover.

D. The cover of a closed asbestos waste disposal site shall maintain the integrity of the soil cover, slopes, vegetation, and drainage structures.

4. REPORTING

A. Provide a detailed survey description of the location where asbestos waste was deposited. Maintain a permanent marker or survey post onsite for reference.

B. Prepare and annually update the as-built or record drawing showing the location and volume of waste deposited at the asbestos waste disposal site. Send a copy of these drawings to the department's solid waste program when the site is closed.

C. Provide a record to subsequent landowners that asbestos waste has been buried on the property and that it would be hazardous to excavate that area. The location of the asbestos deposit should be conveyed in the land title or deed document.

5. REFERENCES

EPA Document 530/SW85-007, May 1985

ADEC, Solid Waste Management Permit Application for Monofill Disposal of Regulated Asbestos-Containing Material

ADEC, Solid Waste Management Regulations, 18 AAC 60, June 28, 1996

Code of Federal Regulations: 40 CFR 61.141 - 157 (EPA)

Code of Federal Regulations: 29 CFR 1910.1001 (OSHA)